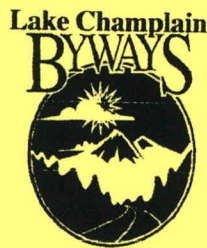


LAKE CHAMPLAIN BYWAYS HIKE AND WALK STUDY

*An Inventory and Assessment of the Hiking and Walking Resources in the
Lake Champlain Shoreline Communities*

October 31, 1999



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LAKE CHAMPLAIN BYWAYS

The Lake Champlain Byway project is a collaborative effort between three New York Planning offices (Clinton, Essex, and Washington) and four Vermont Regional Planning Commissions (Northwest, Chittenden, Addison, and Rutland), the Adirondack North Country Association, the New York Department of Transportation, and the Vermont Agency of Transportation. The goal of the National Scenic Byway planning grant is to develop strategies and partnerships to balance the stewardship of the Byway resources with tourism, economic and community development. The Célébration Champlain! Strategic Plan is a component of the Lake Champlain Byways Corridor Management Plan that includes actions for economic development, community revitalization, and visitor, resource, and roadway management needs in the eight counties adjacent to Lake Champlain.

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This project was funded through a Federal Highway Administration National Scenic Byway planning grant to develop a corridor management plan for Lake Champlain Byways

Summary of The Lake Champlain Byways Project: An Inventory and Assessment of Hiking and Walking Resources in the Lake Champlain Shoreline Communities

The purpose of this project is to develop an inventory in the form of an electronic database to centralize information regarding hiking and walking resources in the Lake Champlain Region, and to prepare a subset of the information for future development of a public document or guide. The inventory will be the basis for further planning and development of the region's natural, recreational, and cultural resources. This project is part of the bi-state Lake Champlain Byways Management Plan. The process developed by Yellow Wood Associates (YWA), Elizabeth Bassett, and the Byways Task Group to collect, organize, and analyze the necessary data, conduct a review of related literature, analyze the proximity of walking resources to public transportation, and develop flexible, useful maps for the Lake Champlain Region walking resources is summarized below.

Identify the "Universe" of Potential Hikes and Walks

The first task in developing an inventory and assessment of the walking resources in the Lake Champlain region was to identify the "universe" of hikes and walks on both sides of the Lake. Two initial publications were used to determine walks already documented. YWA used the "Adirondack Great Walks and Day Hikes" guidebook to locate existing walking resources in the primary and secondary communities named in the RFP. Elizabeth Bassett took responsibility for identifying the Vermont walking resources by expanding upon her book, Nature Walks in Northern Vermont and The Champlain Valley. A draft list of walks and hikes was presented to the Lake Champlain Byways Task Group and the relevant trails, walks, and contact persons were identified.

Determine the Relevant Information, Collect Data, and Prepare Database

The next step was to develop a data collection tool prior to contacting organizations and/or individuals responsible for the trail or walks. The information form was designed to ensure thorough data collection for each site and create an Access database. The information requested was organized exactly the way it would look in the electronic database, and included four basic categories: 1) site access, 2) site features, including natural, historical, cultural, 3) related infrastructure, and 4) maintenance routines and plans. Reporting the raw data in the same format as the electronic entry form allows for very efficient data entry.

Based on the list of contact persons developed with the Task Group, YWA and Elizabeth Bassett interviewed those responsible for each site by phone. Information forms with instructions were sent to individuals responsible for multiple trails. Copies of the data forms are appended to this report. There was a very positive response to the coordination effort. Many people supplied information, maps, and brochures regarding their local trails and walks and requested that they be kept informed as the project progresses. In all, we recorded trails and walks from forty towns throughout the Region.

YWA entered the data into the database and presented printouts of the database to the Task Group. All edits, comments, and follow up research were added prior to transferring the database to the project coordinator. Although not all trails and walks had information available in each area requested, the database organizes a significant amount of information on the trails in the Lake Champlain Region. Trails that have very little information can now be identified for future follow up.

The Access database for trails and walks in the Lake Champlain Region contains information on location, contact person and/or organization, description, types of use allowed, unique natural and cultural features, maintenance responsibility and routine, map and brochure availability, fees, and improvement plans. The database contains 119 entries including village historical and architectural walks, recreational trails, and hikes. The Access database can be easily queried to address questions and concerns about Region hikes and walks. For example, the trails can be sorted according to whether or not there are maps or brochures available. Even more powerful is the potential to link the Access database to the ArcView projects discussed below. Access has a similar structure to the spreadsheets that underlie ArcView projects. By linking the two, users can click a trail on a map and automatically open all of the data recorded on that trail. Conversely, one could select the trails in Access that have educational programs available and highlight them on the map.

Literature Review

The project included conducting a targeted literature review to compile a written summary of guidebooks, maps, and other related publications for the Lake Champlain Region. The "Adirondack Great Walks and Day Hikes" has the most comprehensive list of publications for northeastern New York. Many of these publications however, focus on the High Peaks and are not relevant to the Region area. Such publications have been excluded. No additional New York focused publications were added to this list. One regional publication that included some New York sites was added. (YWA made calls to the Lake Placid/Essex County Visitor Bureau, the Lake Champlain Visitor Center, and the Lake Placid bookstore - With Pipe and Book, to be certain we did not miss any publications.) Elizabeth Bassett was responsible for the literature review for the Vermont side of the Lake. She expanded the extensive bibliography from her most recent book. The bibliography is presented separately from this summary.

Analyze the Proximity of Walking Resources to Other Transportation Routes

The list of trails and walks from the Access database were compared with public transportation routes around the Lake Champlain Region. The schedules and routes of trains, busses, and ferries were provided by the Task Group to Elizabeth Bassett who then conducted the analysis of their proximity to the trails and walks in the Region.

In general, if a walk is within a mile of public transportation, the connection is noted. In either case the distances to transportation have been noted. Distances are also noted where they are longer than a few blocks, particularly for sites near bus routes. A few walks in New York state are on roads which are many miles in length and the location of the trail head was estimated in order to determine the distance from a transportation connection. Every Amtrack stop, regardless of the proximity to specific walks, has been noted. Visitors, for example, that are up from New York City may wish to see a site that is within a cab ride of an Amtrack stop, therefore indicating these stops may be helpful.

The transportation connections have been documented by county around the Lake Champlain Region. In each county the type of public transportation is noted and the walks and trails that are accessible by public transportation. Each trail that may be accessible by different bus routes will have these indicated by route letter, and the approximate distance from the bus stop if more than one block. All walks and trails that have no connections to public transportation are also listed for each county below.

Clinton County-NY

- CART- Clinton Area Rural Transit serves rural Clinton county, shopping areas, and the city of Plattsburgh. Most routes are weekday service only. The NCSC/Cumberland Head bus stops at the Grand Isle ferry dock. 518-561-1452 or 565-4713.

Lake Alice, Chazy - approximately 3 miles to North Rural "A"
Plattsburgh Waterfront Walk, Plattsburgh
AuSable Marsh, Peru - Rural South-AuSable
Walking Tour of Historic Keeseville, AuSable - Rural South-AuSable
AuSable Chasm, AuSable - Rural South-AuSable

- LCTC- Lake Champlain Transportation Company.
Seasonal ferries to Port Kent from Burlington and year-round, 24-hour service to Cumberland Head from Grand Isle. A bus to Plattsburgh stops at the Cumberland Head ferry dock.
- Amtrak serves Plattsburgh and Port Kent.
- Trails With No Connection to Public Transportation
Valcour Island, Peru
Point Au Roche State Park, Beekmantown

Essex County-NY

- Amtrak stops in Port Henry, Ticonderoga, and Westport.

Port Henry Village Walking Tour, Moriah
La Chute Interpretive Trail, Ticonderoga
Westport Village, Westport
Treadway Mountain, Ticonderoga
Arnold Pond and Skiff Mountain, Ticonderoga
Bear Pond Loop, Ticonderoga
Coon Mountain, Westport
Split Rock Mountain, Westport
Mt. Defiance, Ticonderoga
- LCTC- ferry service, except for winter months, to Essex from Charlotte, Vermont.

Essex Walking and Driving Tours, Essex

- CHAMP, Essex County Public Transportation. Champ Commuter Busses 1,2, and 3, run weekdays, Bus 3 only from September to June. Busses will stop on all main routes if hailed. Most trails are served by Champ Commuter Bus 2 which runs once in the morning and once in the evening. 518-523-4431. E-mail: lpstight@capital.net. www.lakeplacidsightseeing.com

Port Henry Village Walking Tour, Moriah - Commuter bus 2
La Chute Interpretive Trail, Ticonderoga - approximately 1 mile to Commuter bus 2
Westport Village, Westport - Commuter bus 2
Ticonderoga Walking Tour, Ticonderoga - Commuter bus 2
Coon Mountain, Westport - approximately 3 miles to Commuter bus 2 or 3
Split Rock Mountain, Westport - Commuter bus 2
Mt. Defiance, Ticonderoga - Commuter bus 2
Belfry Mountain, Moriah - Commuter bus 2

- Trails with No Connection to Public Transportation:
Crown Point Historic Site, Crown Point
Penfield Homestead Museum, Crown Point
Grizzle Ocean, Ticonderoga
Cook Mountain, Ticonderoga

Rock Pond Mine, Ticonderoga
Poke-O-Moonshine Mountain, Chesterfield
Wickham Marsh, Chesterfield

Washington County-NY

- Amtrak serves Whitehall.
Whitehall Heritage Area, Whitehall
- Trails with No Connection to Public Transportation:
Black Mountain, Dresdan
Pember Nature Preserve, Granville
Granville Village Walking Tour, Granville

Addison County-VT

- Champlain Valley Weekender, summer train service, two trips each day on Saturday and Sunday only, between Burlington and Middlebury. Stops in Vergennes and Shelburne.
800-707-3530 or 802-463-3069; railtour@sover.net; www.rails-vt.com

Vergennes Walking Tour, Vergennes
Vergennes Falls Park Trail, Vergennes
Middlebury Historic District, Middlebury
Trail Around Middlebury (TAM), Middlebury
- ACTR-Addison Country Transit Resources. Vans run on a fixed route between 8:00 a.m. and 5:30 p.m., daily. ACTR will meet any groups on request, even dropping walkers at one location and picking them up at another (for use of the TAM). Free of charge but donations appreciated. 802-388-1946.

Middlebury Historic District, Middlebury
Trail Around Middlebury (TAM), Middlebury
- Trails with No Connection to Public Transportation:

Kingsland Bay State Park, Ferrisburgh
Button Bay State Park, Ferrisburgh
Little Otter Creek Marsh, Ferrisburgh
DAR State Park, Addison
Dead Creek Waterfowl Management Area, Addison
Snake Mountain Wildlife Management Area, Addison
Shoreham Village Walk, Shoreham
Rokeby, Ferrisburgh

Chittenden County-VT

- CCTA- Chittenden County Transportation. Busses, equipped with bike racks, run regularly scheduled service in the greater Burlington area. Several trails are served by nearly every bus line (Burlington Bike Path, Cycle the City Loop). Other routes are indicated for each trail. While it is an unlikely scenario, one could take the bus and walk several miles to a trail (Shelburne Farms, LaPlatte River Marsh). With a bike, however, access is certainly possible. 802-864-2282. Route names are indicated by letters.

Red Rocks Park, S. Burlington - S
Hill Section, Burlington - C,A

Historic Walking Guide to Downtown Burlington, Burlington - C,N,O,R,A,E
 Burlington Bike Path, Burlington - C,N,O,S,R,A,L,E
 Intervale, Burlington - several blocks from R
 Salmon Hole / River Walk, Burlington - R
 Centennial Woods, Burlington - A
 South Burlington Recreation Path, S. Burlington - S
 Burlington Tree Walk, Burlington - C,A,L,O
 Shelburne Farm, Shelburne - 1-2 mile walk to S
 LaPlatte River Marsh Area, Shelburne - 1-2 mile walk to S
 East Woods Natural Area, S. Burlington - S
 Waterfront and Downtown, Burlington - C,O,R,A,L,E
 Winooski Falls Mill Historic District, Winooski - R, E
 Winooski Nature Trail, Winooski - R, E
 Historic Walking Tour of Shelburne Village, Shelburne - S
 Ethan Allen Homestead, Burlington - N
 Old North End, Burlington - N, O
 Ethan Allen Park, Burlington - N
 Cycle the City Loop, Burlington
 LaPlatte Nature Trail, Shelburne - S
 Walking Tour of Shelburne Falls, Shelburne - S
 Allen Hill / Shelburne Bay Park, Shelburne - 1-2 mile to S

- Champlain Valley Weekender, summer train service, two trips each day on Saturday and Sunday only, between Burlington and Middlebury. Stops in Vergennes and Shelburne. 800-707-3530 or 802-463-3069; railtour@sover.net; www.rails-vt.com

LaPlatte Nature Trail, Shelburne
 Walking Tour of Shelburne Falls, Shelburne

- Amtrak is scheduled to begin service to Shelburne and Burlington in August, 1999.
- LCTC- Lake Champlain Transportation Company. Seasonal ferries run from Burlington to Port Kent, New York, carrying passengers, cars, and bicycles. Daily service except for winter months between Charlotte and Essex, New York. 802-864-9804.
- Trails with No Connection to Public Transportation:
 - Muddy Brook, S. Burlington
 - Colchester Pond, Colchester
 - Eagle Mountain Natural Area, Milton
 - Delta Park, Colchester
 - Airport Park, Colchester
 - Colchester Bog, Colchester
 - Causeway Park Rec. Path, Colchester
 - Half Moon Cove, Colchester
 - Mallets Bay State Park, Colchester
 - McCrea Farm Park, Colchester
 - Sunny Hollow, Colchester
 - Demeter Park, Charlotte
 - Williams Woods Natural Area, Charlotte
 - Mt. Philo State Park, Charlotte
 - Pease Mountain Natural Area, Charlotte

Franklin County-VT

- Amtrak stops in St. Albans.

- Northwest Vermont Public Transit serves the St. Albans area with downtown shuttle service and a bus to Richford. 802-527-2181.

Missisquoi Valley Rail Trail, Swanton - Downtown shuttle and Richford bus
 Hardack Reservation, St. Albans - Downtown shuttle
 Fitness Trail, St. Albans - Downtown shuttle
 Widows on St. Albans, St. Albans - Downtown shuttle

- Trails with No Connection to Public Transportation:

Burton Island State Park, St. Albans
 A Walk Down Falls Road, Georgia
 A Walk Down Horseshoe Barn Road, Georgia
 Black Creek and Maquam Creek Trail, Swanton
 Woods Island, St. Albans

Grand Isle County-VT

- LCTC- Ed Weed Fish Culture Station is a short walk from the ferry in Grand Isle.
- Trails with No Connection to Public Transportation:

South Hero Recreation Trail, South Hero
 Alburg Recreational Rail Trail, Alburg
 Alburg Dunes State Park, Alburg
 Fisk Quarry, Isle La Motte
 North Hero State Park, North Hero
 Knight Point State Park, North Hero
 Knight Island State Park, North Hero
 Grand Isle State Park, Grand Isle

Rutland County-VT

- Amtrak serves Rutland.
- Trails with No Connection to Public Transportation:

Half Moon State Park, Hubbardton
 Hubbardton Battlefield, Hubbardton
 Shaw Mountain Natural Area, Benson
 Walking Tour of Benson Village, Benson
 Helen Buckner Preserve at Bald Mountain, West Haven
 Delaware and Hudson Rail Trail, Poultney
 Big Trees Nature Trail, Poultney
 Slate History Trail, Castleton
 Glen Lake Trail, Hubbardton
 Castleton Main Street Walk, Castleton

Map Development

Ninety-six of the 119 trails and walks in the database are included in the mapping portion of this project. Sites with maps readily available were chosen for mapping provided those responsible for the hike or walk were agreeable. Those included are as follows:

Vermont Walks -- 18
New York Walks -- 13
Vermont Hikes -- 47
New York Hikes -- 18

Twenty of the 119 walks and hikes in the database are not included in the maps accompanying this project:

Little Otter Creek Marsh, Ferrisburgh -- no map or inadequate map
Snake Mountain Wildlife Management Area, Addison -- no map or inadequate map
Historic Walking Tour of Shelburne Village, Shelburne -- identified after maps were completed
Half Moon Cove, Colchester -- no map or inadequate map
Mallets Bay State Park, Colchester -- trails will be ready in 2 to 3 years
Sunny Hollow, Colchester -- no map or inadequate map
Demeter Park, Charlotte -- do not publish request
Shelburne Pond, Shelburne -- no map or inadequate map
Proposed Waterfront Trail, Moriah -- do not publish request
Fort Ticonderoga, Ticonderoga -- do not publish request
The Pinnacle, Westport -- the land is no longer open to public
Fitness Trail, St. Albans -- no map or inadequate map
Highgate Riverwalk Trail, Highgate Center -- do not publish request
Swanton Heritage Trail, Swanton -- do not publish request
Highgate Cliffs State Park, Highgate -- do not publish request
South Hero Recreation Trail, South Hero -- do not publish request
Fisk Quarry, Isle La Motte -- do not publish request
Hubbardton Battlefield, Hubbardton -- no map or inadequate map
Helen Buckner Preserve at Bald Mountain, West Haven -- no map or inadequate map
Big Trees Nature Trail, Poultney -- no map or inadequate map

YWA used ArcView, a geographical information system (GIS) capable of creating and printing maps and, perhaps more importantly, analyzing the data once entered. Due to limitations in existing GIS data, specifically the different reference points used in mapping New York and Vermont, YWA developed two projects to cover the Lake Champlain Region with sufficient detail. The Vermont project is built upon data from the Vermont Center For Geographic Information. The project that forms the foundation for the New York side is built from a Region-wide set of data created and/or compiled by the Champlain Valley Heritage Corridor. The projects look and behave exactly the same way and have identical layouts that include the same basic information. These maps have not been digitized and have been produced from existing maps that may or may not be accurate themselves. Each trail was drawn with enough detail to show the trail in relation to major features such as roads and highways. However, the trail maps were never intended to be used as hiking or walking guides.

With ArcView, the maps can be easily updated and modified as trails change or are removed from public use. Additional layers of information can be added in order to address a specific concern or query. For example, restaurants and bed and breakfast locations could be added and queried to show only those within ten miles of a given trail. Using ArcView as the foundation for a trail and walk inventory allows for a tremendous amount of flexibility and powerful analytical capacity.

Although certain features are not on the printed maps, they are stored in the project as themes that can be accessed as desired. For example, the Winooski river and its tributaries are available in the project, but have been left off the maps to reduce clutter. Other features included as themes in the project, but not on the printed maps, are: NY camping sites, the

Region boundary, smaller rivers for the VT Region, snowmobile trails, ferry crossings, and shipwrecks.

Guidebook Outline

In addition to the inventory and maps, YWA prepared an outline for a guidebook based on the information collected:

- I. The Lake Champlain Region - Setting the scene in 2 pages
Where & What is the Region?
What holds the Lake Champlain Region together as a region: Natural History, Cultural History
- II. The Lake Champlain Byways - Why We Made This Guide and How To Use It - 2 pages
 - a. Describe the committee and its objectives and explain the connection between the region's natural features, cultural history, and today's rural economy. When you patronize businesses in the area, your choices help to support and maintain the area's vitality and quality of life.
 - b. Describe how the guide is set up - what the user can find and where
- III. Index to Walks and Hikes
 - a. Topical - listing interests such as birding, military sites, historic industrial sites, shoreline, etc. indexed to specific walks or hikes with map numbers and page
 - b. Geographically by section of the Region - grouped around VT-NY ferry and bridge crossings
 - c. Matrix listing all hiking trails on x axis and specific interests/amenities on y axis
 - d. Matrix listing all village walks on x axis and specific interests/amenities on y axis
- IV. Maps and Descriptions
 - a. Maps grouped geographically with both village walks and hiking trails located
 - b. Brief description of each historic village walk including distance, surface, outstanding features, brochure/map availability, local contact, symbols designating availability of amenities such as parking, public restrooms, camping, biking, skiing, etc.
 - c. Brief description of each hiking trail including distance, surface, outstanding features, brochure/map availability, local contact, symbols designating availability of amenities such as parking, public restrooms, camping, biking, skiing, etc.
 - d. Listing of public lands and facilities in this region (these could be located on the map as well)
 - e. Listing of commercial lodging, restaurants, guide services, etc. in this area of the Region or reference to appropriate pages in the advertising section
- V. List of Additional Publications
 - a. Focus on free information from state and local agencies: DEC's, Chambers of Commerce, local historic societies, State Historic Preservation Divisions, downtown programs, etc.
 - b. Commercial publications which augment the information supplied by this guide on the NY and VT historic villages and day hiking opportunities
- VI. Advertising Section
 - a. Group advertisers by topic (lodging, food, equipment, services, etc.) and area corresponding to map and page numbers
- VII. Region Stories

- a. Brief vignettes about Region communities, people, businesses, etc. which give a flavor for the area, generate interest and understanding, and inform visitors about things they may not otherwise discover should be dispersed throughout this guide

Recommendations

As the Byways Committee continues its work, we recommend the following:

- Organize hikes and walks around transportation links between VT and NY (ferries and bridges). Develop links between VT and NY lodging, outfitters, guides, restaurants, etc. Develop an ongoing relationship between the database manager and the towns throughout the Region. Send information forms to town offices to be circulated as a way of picking up other walks and hikes that have not been included in this project. Town officers and their connections will help increase the depth and accuracy of the existing information on each trail in the database.
- Expand the coverage of the walks and trails to Canada.
- Project the two ArcView projects into one, and add detail as needed including additional trail and walking resources (rail trails and bikeways) as they develop. ArcView has a special projection tool that allows data layers not referenced the same to be brought together. Once they are together, additional details can be added for both sides of the lake to further promote the Region.
- Locate all trails that do not have brochures or maps and decide which should have such materials created. Consider grouping certain trails to lower costs and develop linkages between individual trails, village walks, and the supporting resources of the area. For example, a brochure for a series of walks and trails may have a place to ride bicycles, a historic walk through downtown, and a short nature hike to a scenic overlook. Along each segment the brochure can indicate local attractions, dining, outdoor gear rental establishments, lodging, etc. Including the local businesses in the brochure will not only stimulate more business for them, but will serve as a great way to fund the development of the brochure and maps by selling the advertising space.
- Develop a means to assess trail infrastructure and characteristics. Trails may not have adequate parking or maintenance routines to support additional visitation. Query the database and then determine how site visits should be accomplished. Each site visit will include a specific set of questions for each trail. Perhaps site visits can be made by area citizens or school groups to increase local awareness of walking resources and gather feedback on how local citizens envision their use: Do the neighbors want more people using the trail next door? Have they had problems of cars parking along their road?
- Integrate relevant businesses in brochure/guidebook.
- Improve public access and transportation to sites.

VERMONT GUIDEBOOKS

Bassett, Elizabeth. *Nature Walks in Northern Vermont and the Champlain Valley*. Boston: Appalachian Mountain Club Books, 1998. Forty-three nature-rich walks near Lake Champlain. Includes descriptions of flora and natural and human history, maps, trail descriptions, and directions to trailheads.

Day Hiker's Guide to Vermont, Third Edition. Montpelier, Vermont: The Green Mountain Club, Inc., 1989. Trail guide to hundreds of hiking and walking trails not included in the Long Trail Guide. Includes maps, trail descriptions, and directions to the trailheads.

DiCesare, Laurie. *A Guide to Colchester's Parks and Natural Areas*. Colchester, Vermont: Colchester Parks and Recreation Department and Paw Prints Press, Inc., 1993. Maps, site

descriptions, and directions to thirteen parks and natural areas in Colchester. Extensive descriptions of flora.

Gange, Jared. *Hiker's Guide to the Mountains of Vermont*. Huntington, Vermont: Huntington Graphics, 1994. Selected hikes across the state with trail descriptions, trailhead locations, and maps.

Lewis, Cynthia C. & Thomas J. *Best Hikes with Children in Vermont, New Hampshire, & Maine*. Seattle, WA: The Mountaineers, 1991. A number of family-friendly hikes in Vermont.

Lindemann, Bob, and Deaett, Mary, and The Green Mountain Club. *Fifty Hikes in Vermont*, Fourth Edition. Woodstock, Vermont: Back Country Publications, 1997. Selected hikes in Vermont with trail descriptions, trailhead locations, and maps.

Long Trail Guide, Twenty-fourth Edition. Waterbury Center, Vermont: The Green Mountain Club, Inc., 1996. Trail guide to Vermont's state-long ridgeline trail and its side trails. Includes topo maps of Mt. Mansfield and Camel's Hump regions, trail descriptions, and directions to trailheads.

Mikolas, Mark. *Nature Walks in Southern Vermont*. Boston: Appalachian Mountain Club Books, 1995. Forty-five nature-rich walks in Southern Vermont. Includes descriptions of flora and natural and human history, maps, trail descriptions, and directions to trailheads.

Stout, Marilyn. *Vermont Walks: Village and Countryside*, Montpelier, Vermont: Vermont Life, 1995. Village walks across the state on town roads. Includes historical background and maps.

MAPS

The Long Trail Maps- Green Mountain Club Topographic Maps. The Green Mountain Club. Topographic maps of Vermont's Long Trail (1988), Camel's Hump (1985), and Mt. Mansfield (1987) with numbered hiking trails on weather resistant paper.

Northern Cartographic - Lake Champlain Region, 2nd edition, 1998. Road Map Including directions for Lake Champlain Bikeways and descriptions of historic sites, museums, and preserves.

Vermont Atlas and Gazetteer, 9th edition. Freeport, Maine: DeLorme, 1996. 11x16 format. Detailed road maps with topo contours, hiking trails, street names, and special symbols locating features described in the Gazetteer section.

U.S. Geological Service Topographic Maps. Available in some local sporting goods stores or directly from USGS Map Distribution Federal Center, Building 41, Box 25286, Denver, CO 80225. Also at 1-888 ASK USGS. Information on the web at usgs.gov

OTHER PUBLICATIONS

Brown, Cindy Kilgore. *Vermont Wildlife Viewing Guide*. Helena, Montana: Falcon Press Publishing Co., 1994. Describes wildlife across the state at 50 destinations.

Burns, G.P. and Otis, C.H. *The Handbook of Vermont Trees*. Rutland, Vermont: Charles E. Tuttle Company, Inc. The definitive guide to local trees, a bulletin of the University of Vermont's Agricultural College, written in 1916. Describes lumbering characteristics as well as visual distinctions.

Cobb, Boughton. *A Field Guide to the Ferns*. Boston: Houghton Mifflin Co., 1975. Keys and describes hundreds of ferns. Helpful drawings.

Dodge, Harry W., Jr. *The Geology of D.A.R. State Park, Mt. Philo State Forest Park, Sand Bar State Park*. Montpelier, Vermont: Department of Water Resources, 1969. In-depth geological reference to the three state parks.

Exploring Lake Champlain and its Highlands. Burlington, Vermont: The Lake Champlain Committee, 1981. An encyclopedic reference of the history and commerce of the lake and basin.

Gibbons, Euell. *Stalking the Wild Asparagus*. New York: David McKay Company, Inc., 1972. Musings and recipes of an experienced forager.

Higbee, William Wallace. *Around the Mountains*. Charlotte, Vermont: The Charlotte Historical Society, 1991. A local history compiled from newspaper writings of the author in the late 19th century.

Johnson, Charles W. *The Nature of Vermont*. Hanover, NH: University Press of New England, 1988. Detailed explanations of the state's ecosystems and its geological and human history.

Klyza, Christopher McGrory & Trombulak, Stephen C. *The Story of Vermont, A Natural and Cultural History*. Hanover, NH: Middlebury College Press, published by University Press of New England, 1999. In depth natural and human history of the state with extensive descriptions of its natural communities.

Lawrence, Gale. *A Field Guide to the Familiar*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1984. Lucid, in-depth explanations of the lives of many familiar plants and animals.

Lingelbach, Jenepher. *Hands-On Nature*. Woodstock, Vermont: Vermont Institute of Natural Science, 1988. Written for VINS' renowned elementary school program, ELF, Environmental Learning for the Future. Simple explanations of often complex natural phenomena.

Ludlum, David M. *The Vermont Weather Book*. Montpelier, Vermont: Vermont Historical Society, 1985. Vermont weather history and lore. Includes explanations of some of Vermont's weather tragedies.

Miller, Dorcas. *Track Finder, A Guide to Mammal Tracks of Eastern North America*. Berkeley, California: Nature Study Guild, 1981. Pocket guide to commonly found tracks.

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